

**From:** [Jen Mott](#)  
**To:** [Dana Bayuk](#)  
**Cc:** [Bruce K Marvin \(bmarvin@geosyntec.com\)](#); [Cindy Bartlett \(CBartlett@Geosyntec.com\)](#); [Dan Hafley](#); [LARSEN Henning](#); [peterson.jennifer@deq.state.or.us](#); [poulsen.mike@deq.state.or.us](#); [Sarah Riddle](#); [DeMaria, Eva](#); [John Renda](#); [Bob Wyatt](#); [Patty Dost](#); [John Edwards](#); [Carl Stivers](#); [Ben Hung](#); [Rachel Melissa \(RMelissa@pearllegalgroup.com\)](#); [Sheldrake, Sean](#); [Scott Coffey](#); [Rob Ede](#); [Lance Peterson \(PetersonLE@cdmsmith.com\)](#); [James Peale](#); [Kelly Titkemeier \(ktitkemeier@maulfoster.com\)](#); [Madi Novak](#); [Mary Benzinger \(mbenzinger@maulfoster.com\)](#); ["Mike Murray"](#); [Myron Burr \(myron.burr@siltronic.com\)](#); [Vipul Srivastava \(VSrivastava@Geosyntec.com\)](#); [Ben Johnson](#); [Tim Stone](#); [Jen Mott](#)  
**Subject:** RE: Proposed Revision to NW Natural Gasco Groundwater Monitoring Program - Notes from January 20 Meeting  
**Date:** Friday, January 27, 2017 3:30:20 PM  
**Attachments:** [2016-09-12 - Gasco Groundwater Monitoring Program.pdf](#)

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Dana,

The following email is provided on behalf of John Edwards.

Hello Dana. This email provides draft notes from our January 20 meeting held to discuss the September 12, 2016 Anchor QEA Memorandum, Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program (attached). The January 20 meeting was attended by you, Henning Larsen, John Renda, Lance Peterson, Rob Ede, and myself. The current groundwater monitoring program is termed the integrated program because it includes the wells in the routine monitoring program and wells in the HC&C source control monitoring program. DEQ requested that these meeting notes be focused on what will be provided in the revised proposal.

Anchor QEA began the meeting by providing a summary of the September proposal. This included a review of the water quality trend graphs for some of the wells whose trends appear to be affected by HC&C operation. DEQ requested that we provide the statistical method that is used to plot the water quality trend lines on the graphs provided in the proposal. As a follow-up to this request, it was confirmed that the trend lines were created using logarithmic regression.

We then had a lengthy discussion on the proposed monitoring plan and our technical justification for adjusting it.

Anchor QEA requested DEQ to provide written comments on the September proposal to improve our ability to provide an acceptable revised proposal. DEQ requested us to revise and resubmit the proposal based on the discussion held during this meeting.

When revising the proposal DEQ asked us to consider the following:

Retain some of the river piezometers because they provide information on the influence of the HC&C system.

Select wells that provide geographic coverage of the site, rather than relying solely on which wells appear to be affected by the HC&C system.

Check back in the records to make sure the revised proposal meets the HC&C monitoring objectives, e.g. document water quality trends and obtaining gross chemistry (cation/anion) data at the extraction wells.

Does our revised monitoring network provide adequate geographic coverage for the upland FS preliminary indicator compounds?

Does our revised monitoring network include adequate geographic coverage of upland monitoring

wells from the routine monitoring program?

Provide a nearshore cross section parallel to the shoreline that highlights which wells and piezometers are being retained in the monitoring program. This will be used to review adequate geographic coverage of the well network.

DEQ informed us that they don't want NW Natural to stop monitoring any wells that we are currently responsible for on the Gasco OU portion of the Siltronic property until the RIRA Addendum has been reviewed by DEQ. Also that Siltronic will soon be taking over monitoring of all wells on Siltronic property located outside of the Gasco OU, but DEQ is not sure when that will happen.

Anchor QEA said that the process of revising the proposal and obtaining DEQ agreement on a revised groundwater monitoring program needs to be completed before the next scheduled event in March, 2016. DEQ agreed that we need to complete this process to meet that schedule.

Please review and approve these notes as soon as possible, or provide comment as needed.

Thanks

John

Please contact John with any questions.

Thank you,  
Jen Mott ☺  
Anchor QEA, LLC  
[jmott@anchorqea.com](mailto:jmott@anchorqea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014

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**From:** Jen Mott

**Sent:** Monday, September 12, 2016 3:31 PM

**To:** Dana Bayuk <BAYUK.Dana@deq.state.or.us>

**Cc:** Bruce K Marvin ([bmarvin@geosyntec.com](mailto:bmarvin@geosyntec.com)) <[bmarvin@geosyntec.com](mailto:bmarvin@geosyntec.com)>; Cindy Bartlett ([CBartlett@Geosyntec.com](mailto:CBartlett@Geosyntec.com)) <[CBartlett@Geosyntec.com](mailto:CBartlett@Geosyntec.com)>; Dan Hafley <[HAFLEY.Dan@deq.state.or.us](mailto:HAFLEY.Dan@deq.state.or.us)>; LARSEN Henning <[henning.larsen@state.or.us](mailto:henning.larsen@state.or.us)>; Jennifer Peterson ([peterson.jennifer@deq.state.or.us](mailto:peterson.jennifer@deq.state.or.us)) <[peterson.jennifer@deq.state.or.us](mailto:peterson.jennifer@deq.state.or.us)>; Mike Poulsen ([poulsen.mike@deq.state.or.us](mailto:poulsen.mike@deq.state.or.us)) <[poulsen.mike@deq.state.or.us](mailto:poulsen.mike@deq.state.or.us)>; Sarah Riddle <[sriddle@pearllegalgroup.com](mailto:sriddle@pearllegalgroup.com)>; Eva DeMaria ([DeMaria.Eva@epa.gov](mailto:DeMaria.Eva@epa.gov)) <[DeMaria.Eva@epa.gov](mailto:DeMaria.Eva@epa.gov)>; John Renda <[jrenda@anchorqea.com](mailto:jrenda@anchorqea.com)>; Bob Wyatt <[rjw@nwnatural.com](mailto:rjw@nwnatural.com)>; Patty Dost <[pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)>; John Edwards <[jedwards@anchorqea.com](mailto:jedwards@anchorqea.com)>; Carl Stivers <[cstivers@anchorqea.com](mailto:cstivers@anchorqea.com)>; Ben Hung <[bhung@anchorqea.com](mailto:bhung@anchorqea.com)>; Rachel Melissa

(RMelissa@pearllegalgroup.com) <RMelissa@pearllegalgroup.com>; Sean Sheldrake  
<sheldrake.sean@epa.gov>; Scott Coffey (coffeyse@cdmsmith.com) <coffeyse@cdmsmith.com>;  
Rob Ede <robe@hahnenv.com>; Lance Peterson (PetersonLE@cdmsmith.com)  
<PetersonLE@cdmsmith.com>; James Peale <jpeale@maulfoster.com>; Kelly Titkemeier  
(ktitkemeier@maulfoster.com) <ktitkemeier@maulfoster.com>; Madi Novak  
<mnovak@maulfoster.com>; Mary Benzinger (mbenzinger@maulfoster.com)  
<mbenzinger@maulfoster.com>; 'Mike Murray' <mmurray@maulfoster.com>; Myron Burr  
(myron.burr@siltronic.com) <myron.burr@siltronic.com>; Vipul Srivastava  
(VSrivastava@Geosyntec.com) <VSrivastava@Geosyntec.com>; Ben Johnson  
<bjohnson@anchorqea.com>; Tim Stone <tstone@anchorqea.com>; Jen Mott  
<jmott@anchorqea.com>

**Subject:** Proposed Revision to NW Natural Gasco Groundwater Monitoring Program

Dana –

Attached is the Proposed Revision to the NW Natural Gasco Groundwater Monitoring Program.  
NW Natural is prepared to begin the next scheduled monitoring event once we have agreement on  
the revisions to the monitoring program.

If you have any questions, please contact John Renda or John Edwards.

Thank you,  
Jen Mott ☺  
Anchor QEA, LLC  
[jmott@anchorqea.com](mailto:jmott@anchorqea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014

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